SOME RECENT SURGICAL METHODS OF THE PRESENT-DAY SURGICAL NURSE *

BY ANNA JAMMÉ, R.N.
Graduate of the Johns Hopkins Hospital; Superintendent of Nurses, St. Mary's Hospital, Rochester, Minn.

THE two great surgical events of the past century, the discovery of anæsthesia, and the development of antisepsis, together with the improvement in the microscope, have caused marvellous advances in surgery and made possible what was once thought beyond human power to do. The opening of new surgical fields, the surgery of the brain, thorax, abdomen, lungs, heart, intestines, organs that were considered sacred to the action of disease, now go before the surgeon as an every day occurrence.

To the nurse belongs the responsibility of the care and comfort of the surgical patient, both before and after the operation. What must be her equipment for this grave responsibility? Must she have merely a mechanical facility, or must she understand and interpret intelligently what is her responsibility in the care of the patient? Should she understand her asepsis and antisepsis as she does her multiplication table in order to be of practical value to the surgeon and a safe factor in the recovery of the patient? Surely her practical knowledge of asepsis cannot have too deep a foundation, but it must above all be soundly and consistently practical, based on sound principles and soap and water cleanliness. In theory, she must understand the processes of inflammation, the part played by the blood in taking care of infection, immunity, and the natural defenses of the body. She will know the sources and ways of infection and the avenues by which it gains entrance to the body. She will understand the laws and factors of surgical procedure, in order to follow out intelligently and consistently a system of technic.

Simplicity of detail in methods of work is becoming more universal. Elimination of much that was formerly thought indispensable marks the line of progress of the surgeon and changes the nurse's methods. From the standpoint of asepsis we are being led into a more rational, and, we might say, more humane method of work. The patient is not taxed by an unimportant routine system.

The elaborate preparation in the matter of diet and catharsis which

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formerly extended over a period of several days is now thought to defeat its own object by lessening the functional capabilities of the digestive tract. A brisk catharsis and customary diet up to the evening before the operation is now considered sufficient to place the patient in the best position for the majority of abdominal operations. Castor oil is most commonly ordered, one and one-half ounces to two ounces, which clears the intestines of all waste material and leaves practically nothing for fermentation. In operations on the upper intestine and stomach, gastric lavage is usually ordered the morning of operation in order to wash out any contained material that might escape into the abdominal cavity during the operation. The absence of the intense discomfort of the over-night preparation of the skin, the vigorous scrubbing, poulticing, wet packs, swathes, etc., not to speak of the mental strain on the patient and horrible anticipation of the morrow, is one factor in the preparation which marks a distinct advance in the humane as well as the scientific side of surgery.

We are told that the skin should be maintained in its natural resisting force. To scrub, poultice, and soak it merely prepares the ground for invading organisms. In present-day surgery, after the patient is placed under ether, the field is thoroughly scrubbed with soap and water, not with a brush, but with a good thick piece of gauze, and then well rinsed. Alcohol and ether or Harrington's solution is then lightly applied.

The careful manipulation of the tissues, administration of anæsthetic and the rapidity with which grave operations are now performed contribute to the resisting force of the patient by not lowering his vitality, and the old time wound infections are almost a thing of the past.

In the general method of the operating room we find some changes in the last ten years. The sloppy, wet floors, which necessitated much mopping during operation on account of the lavish use of irrigation, are now clean and dry, and in the best conducted operating rooms not even a soiled sponge is thrown on the floor. The nurse of the present day wears not only a sterilized gown, sleeves and gloves, but her hair must also be closely covered.

A great surgeon was asked what he considered the most important factor in the after-nursing care of a surgical patient. He said, "a stomach tube and a salt solution." And it would seem with these wisely used, a nurse can work wonderful results in the recovery as well as comfort of her patient. Copious and frequent lavage of the stomach has saved many a life. When there is persistent vomiting of bile or dark colored fluid a good washing out usually stops it at once. In acute dilatation it may have to be done quite frequently, two or three times in twenty-four hours. This prevents absorption of toxic materials in the stomach. It can be done with very little discomfort to the patient by merely adjusting a rubber apron around the neck, which covers the shoulders, and the fluid may drain over the apron to the side of the bed into a foot tub. The bed and floor will be perfectly dry when this is finished.

The normal salt solution given by rectum is now largely ordered. Dr. Cannon has shown that antiperistalsis is the normal movement of the large intestine, excepting in defecation the liquid contents of the bowels are carried to the cæcum where absorption takes place. Dr. Murphy says by introducing large quantities of fluid into the circulation the vessels become filled, dilute the toxic fluid and carry a flow of cleansing serum to the peritoneal cavity. The method of giving is by hanging the can, containing the solution, which should be one-half strength as being more easily absorbed by the mucous membrane, a few inches above the level of the mattress; a rubber catheter is attached to the tube and introduced into the rectum about four inches. The fluid will run very slowly, taking about one and one-half hours to a quart. Two quarts can be easily borne. Should the patient complain of pressure and a desire to expel the fluid, the can may be depressed below the level of the mattress. Replacing the can at a lower level than it was before, the fluid will then run in without causing much discomfort. Removing the tube too soon after it has been exhausted often causes the patient to expel the fluid, consequently wetting the bed and necessitating the discomfort of changing; otherwise the fluid will return to the can and it will flow back into the rectum. Calcium chloride, one dram to the first quart, is added where there is danger of hemorrhage, as in common duct operations. This method of introducing fluids into the system is used after operations for exophthalmic goitre when it is necessary to dilute the toxin in the blood. The blood-vessels and lymphatics are filled and prevent further absorption of the poisonous secretion of the gland. In severe jaundiced cases, where there has been obstruction of the ducts, six quarts of the fluid are ordered to be given during the first twenty-four hours—two quarts every eight hours. It acts by diluting the bile in the circulation and gives the tissues a better fluid. In shock following operation, after severe hemorrhage, or when for any reason the patient is unable to take fluid by mouth, it is a far more comfortable method of introducing it into the system than by way of the tissues (hypodermocylsis).

The sitting posture, or Fowler's position as it is called, together with the use of the slow saline solution per rectum, has made a great change in the mortality of abscess cases and brought about a radical change in nursing. The semi-sitting position, or the exaggerated Fowler's position, requires ingenuity on the part of the nurse to maintain and to do so with comfort to the patient. He will usually slip down and bend so that the abdomen will be on a level with the mattress which is just what we are trying to avoid. There are several devices, such as swings, hammocks, pillows, etc., placed under the buttocks and attached on each side to the head of the bed with a brace at the foot to place the feet against. Dr. Stuart McGuire of Richmond describes a wooden bed seat which consists of a board padded and makes a shelf on which the patient sits. From this a wooden shaft passes through a second board which rests against the foot of the bed. The shaft has a number of holes, and a peg placed in one of them will prevent it from passing through the bottom of the bed and give the patient a firm place for his feet. It can be easily removed by the nurse when it is necessary to do so. Another very effective and a comfortable means is by supporting the patient's back with pillows; a wedge-shaped Ostermoor bolster is placed directly over the mattress at the head of the bed, the small edge of the wedge under the patient's back, three or four pillows piled on top of it, placing it at a comfortable angle. A firm roll under the buttocks and tied on each side to the head of the bed is a good arrangement to maintain the exaggerated Fowler's position. It gives the patient a sense of security and he will not slip down. In cases of gastro-enterostomy this position is used for the purpose of gravity for the fluids of the stomach.

There are still the fundamental discomforts always present after operation which are not now quite so pronounced and which depend much on the individual patient, as pain, nausea, thirst, intestinal gas and sleeplessness, which usually last but a few hours, owing to the simple preparation, shortness of time of operation and careful administration of the anæsthetic. The early administration of water and quick return to light diet, within two days, or as soon as the nausea has disappeared, usually establishes peristalsis and adds to the comfort of the average surgical patient. When it is necessary to avoid catharsis or for intestinal distention, a favorite routine enema is Epsom salts 2 oz., glycerin 2 oz., turpentine 1 oz., which will usually succeed in promoting peristalsis. An enema of milk and molasses—milk 3 oz. and molasses 2 oz.—will frequently accomplish the results when salts and glycerin fail. Castor oil is again given as a routine catharsis, in undrained cases, on the fourth day.

Dressings.—A surgical nurse should have a knowledge of the process that occurs in the repair of the diseases, the condition which favors or retards repair and the significance of exudate. The important factor in healing is the avoidance of infection. Consequently non-interference of the original dressing is the usual order in clean wounds unless there is a rise of temperature. Union is complete in three or four days and the dressing is not touched until the patient leaves the hospital. In perineal operations the healing exudate which surrounds the stitches is not disturbed. A very careful light douching is now permitted after urination until after the bowels are moved on the fourth day, when a low-pressure vaginal douche is given.

Hot moist dressings assist in the process of drainage in suppurative cases. These dressings are applied loosely enough to permit of easy absorption, a sufficient quantity of gauze covered with absorbent cotton and over this a layer of cotton batting, unabsorbable, or oil muslin. Antiseptics of mild strength are frequently used; strong solutions cause injury to the skin.

Boracic acid or bichloride of mercury, 1: 10,000 or 1: 20,000, alcohol 50 per cent., or boracic acid and alcohol equal parts is also used. A pad of several layers of gauze is wrung out of the hot solution and placed lightly over the wound. This dressing is very effectively applied to the wound after operation for exophthalmic goitre or cystic goitre and is very comforting to the patient. It promotes drainage of poisonous serum, relieves nervousness, and lowers the temperature, the patient usually going to sleep immediately after the dressing. For drainage purposes the glass, rubber, split rubber, and cigarette drains are used. In some hospitals these are removed by the nurse according to routine or as ordered by the surgeon. The end of the drain is grasped with the dressing forceps and usually slips out quite easily, unlike the old gauze drains. Force should never be used in removing a drain.

In the detail of abdominal bandages, all clean wounds are now dressed merely with a pad of gauze held in place with two strips of adhesive. When there is a drain, as in abscess cases, gall-bladder operations, etc., which has a bottle attached to the tube leading from the point of drainage, an abdominal binder is adjusted, merely to hold the dressings in place and not for pressure or compression. This has added immeasurably to the comfort of the patient, as it was always difficult to keep the binder in place, and in hot weather it was extremely irritating and uncomfortable.

The surgeon of the present day usually orders the patient out of bed much earlier than formerly and there seems to be less phlebitis in consequence. The circulation is restored to normal conditions and the patient is able to take up his usual mode of living more rapidly.

I have dwelt in this short article only on a few important facts in the method of work of the present-day surgical nurse, hoping the discussion that will follow will bring out many equally important and instructive points in our nursing work.

TUBERCULOSIS WORK OF A SANITARY INSPECTOR *

By JOHANNA VON WAGNER
Sanitary Inspector, Board of Health, Yonkers, N. Y.

With no mortgage on fresh air nor trust to monopolize the supply, it seems unnecessary to have the largest death-rate from a disease which is entirely due to the lack of air and light. When the general public knows more about the laws of health, dark unwholesome dwellings will not be easily rented, even if advertised as cheap, because disease is too dear for most people, especially at the expense of young life.

At the present time we have improved building laws, so that wet cellars, dark unventilated halls, and air-shaft rooms will perhaps soon be a crime of the past.

Cleanliness, real surgical cleanliness, as known in hospitals, will have to be introduced into households to safeguard the family. Sanitary chemistry will do a great deal to improve household hygiene. Underfed and neglected children, such as are found in drunkards' homes, should be taken care of in proper institutions, and the tendencies for an early grave will be lessened.

The lack of cleanliness I hold responsible for much of the tuberculosis in our congested tenement house districts. Suppose I wish to be clean. My neighbor does not wish to be clean, does not recognize his or her duty to the community, expectorates in public places, is not clean in dress or person, in or outside his dwelling. I shall surely suffer, as all humanity forms one chain not stronger than its weakest link. Give us clean air, clean water, clean food, clean utensils, clean bodies, clothes, homes, and streets,—and the record of preventable diseases will become a part of our past painful history.

The musty smell of damp cellar air, the collective odor of six or twelve family cookings, the bedroom odors from overcrowding, all that we notice on entering the usual tenement house, the pernicious habit of two or three members of one family or boarders sharing one bed, and

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